

# VOLUME TWO

## RUSSIA ANNEXES

### MID-TERM EVALUATION OF THE CH2M HILL COMPONENT OF THE ENVIRONMENTAL POLICY AND TECHNOLOGY PROJECT

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**ANNEX 2A**

**EVALUATION OF THE NIS/EPT PROJECT**

**SUB-TEAM FOR RUSSIA**

**REPORT ON EPT ACTIVITIES IN NVK - 2/29/96**

# **I. INTRODUCTION**

Novokuznetsk is one of the world's most heavily polluted cities. Air pollution is particularly bad because Soviet central planners placed the city's residential complexes directly down-wind of district boiler houses and large factories which have no pollution control equipment whatsoever. During extended periods of air inversion, which are a regular feature of the climate in Novokuznetsk, there is less natural air flow and polluted air drifts into the apartment complexes and sits there, causing serious health problems for a large share of the city's population. Water pollution is also a major environmental problem.

The city's efforts to improve these conditions are hampered by its near-total economic dependence on heavy manufacturing industries, including two integrated steel mills, an aluminum refinery, and ferro-alloy, chemical, pharmaceutical, and cement plants. The plants are struggling to compete in world markets using old, inefficient, polluting technologies. The city's industrial base clearly needs to be restructured, if Novokuznetsk is to maintain a viable and competitive economy capable of addressing the health risks caused by the pollution.

## **A. THE PURPOSE AND OBJECTIVES OF THE NVK SUBPROJECT**

The purpose of EPT-funded activities under the NVK Subproject is to demonstrate ways in which the city's air and water pollution can be reduced and to identify approaches through which such improvements might be sustained. The specific objectives of the Subproject, as cited in USAID Delivery Order No. 10 for the EPT Project (DO #10), issued in September 1994, and in the initial CH2M Hill Workplan for the Subproject, are to:

- reduce pollution-related health risks in the Novokuznetsk/Kemerovo region;
- contribute to environmentally sustainable economic development.

The initial Workplan for the Subproject notes that the pollution reduction activities to be funded under the Subproject are to be focused on improving the city's drinking water and on controlling its air pollution.

The recent Updated Workplan for NVK, which was prepared by the Contractor's Regional Field Office in Moscow and submitted December 8, 1996 (and which covers the period January 1, 1996 through March 31, 1997), provides a more refined list of NVK objectives, as follows:

- reduce air pollution, especially particulates emitted by the city's boiler houses;
- improve drinking water, primarily by reducing pathogens;
- diversify the economy by helping to create new small- and medium-sized industries;
- assist the city to prepare and implement a development strategy;
- sustain and replicate the EPT innovations by helping to establish businesses to carry on the work.

## **B. SUBPROJECT TASKS**

Delivery Order No. 10 and the initial Workplan identified seven main tasks to be carried out under the NVK Sub-Project. The first task involves setting up and maintaining an administrative, logistical and technical support structure to manage project-funded activities.

Four of the tasks involve implementing activities related to reducing water and air pollution. The sixth task involves promoting sustainable and environmentally-sound development in Novokuznetsk by helping the city prepare an economic development strategy (NVK 2010) and by encouraging and supporting entrepreneurship. The seventh task involves providing assistance, as needed, to enable participating Russian agencies to disseminate to other localities information concerning the successes and lessons learned from the various EPT activities being implemented in Novokuznetsk.

A Modification to Delivery Order No. 10, issued in September 1995, stipulated that additional funds totalling \$1.3 million were to be provided to the EPT Project to support the extension and replication of activities initiated in Novokuznetsk under the initial scope of services. These resources are to be used to strengthen the sustainability of the current program and to promote the regional replication of successful ventures through market forces and technology transfers. Funds amounting to around \$500,000 have also been allocated to NVK extension and replication activities under EPT Delivery Order No. 1.

During its field visit to Russia in November 1995, the Evaluation Team was informed by the Contractor that some \$700,000 of the \$1.3 million added to Delivery Order No. 10 through the September 1995 contract modification had been obligated in 1995. There was uncertainty at that time, however, whether the remaining \$600,000 would be provided.

The Team has noted in the Updated Workplan that the Contractor proposes to drop the two deliverables due under the Subproject's seventh task (Lessons Learned) and eliminate that task. In addition, several features in the Updated Workplan deviate from Delivery Order No. 10 and from the initial Workplan, as follows: (1) the focus of the NVK 2010 program has been shifted from planning to implementation; (2) a sustainability and replication effort has been added based on the creation or strengthening of business organizations that will continue to implement EPT innovations; and (3) proposals are provided for immediate, low-cost implementation activities to follow-up on the NVK 2010 program.

### **C. ASSUMPTIONS USED BY THE CONTRACTOR IN THE UPDATED WORKPLAN IN ESTIMATING THE BUDGET**

The assumptions used are that:

- the NVK Subproject will be essentially completed by the end of September 1996;
- the transitioning of responsibilities from the US to Russia, and from expatriates to Russians, will be continuous;
- the assignments of expatriate NVK staff will be completed by 30 September 1996;
- the NVK Project Office will be closed at the end of 1996; and
- the Business Center will become gradually self-sustaining and will require no further USAID funding beyond March 1997.

## II. THE STATUS OF SUBPROJECT ACTIVITIES

This section summarizes the status of subproject activities in terms of the seven main tasks identified in the initial Workplan, on the basis of the monthly reports prepared by the contractor for September and November 1995. The summary takes into account proposed modifications to the Subproject's tasks and deliverables contained in the Updated Workplan and cited above in Section I.B.

**Task 1. Project Management.** The Contractor is required to manage project resources so as to produce the deliverables set forth in DO #10. These include preparing detailed annual workplans and submitting quarterly reports on expenditures and accruals.

In view of the Contractor's proposal to close the NVK Project Office at the end of 1996, management responsibilities for EPT-funded initiatives are being transferred to NVK Russian partners (e.g. Vodokanal, SanEpi, the NVK City Administration, and the Oblast and Municipal Committees for Environmental Resources and Nature Protection). Concurrently, major responsibilities for project management are being shifted from the U.S. to Novokuznetsk. Until recently, a senior officer of CH2M Hill resident in the U.S., has served as the Manager of the NVK Subproject. His position is being changed to that of U.S. Project Coordinator, and his project management responsibilities are being taken over by the Expatriate and Russian NVK Managers and the Expatriate and Russian Business Center Directors.

The subproject's four expatriate technical specialists, who are resident in the U.S., will continue to serve as Task Managers to plan and oversee the implementation of EPT-funded activities, specifically those being implemented under Tasks 3-6. Similarly, the Contractor's EPT Field Support Office in Moscow will continue to provide administrative, logistical and technical support to NVK for contract management, the procurement of supplies and equipment, customs clearances, staff recruitment, and communications. Technical advisory staff from the Moscow office will continue to provide technical assistance in areas such as law and regulation, NGO development, training, and business development.

**Task 2. Risk Management.** In March 1994, the EPT/NVK Suproject planning team, based on its observations and interviews with Russian specialists, concluded that air pollution from boilers and contaminated drinking water constituted the city's most serious health risks. Later that year, during the development of DO #10, USAID indicated its intention to have a more systematic risk assessment conducted, but did not program sufficient funds to do the assessment. It did, however, underwrite a review of available baseline health data to determine whether the judgements of the planning team were correct.

The resultant relative risk assessment report, submitted in March 1995, concluded that the planning team had been correct in identifying air pollution from boiler houses and contaminated drinking water as the city's most serious health risks. The report noted that air pollution constitutes the major risk. Also, that the case for contaminated drinking water is less strong, but still compelling. Priorities for the use of project funds were set accordingly.

The Evaluation Team has noted that the risk assessment was based on the "best professional judgement" of the assessment team, and was not conducted in accordance with EPA, World Bank or European Community procedures governing such assessments. It has also noted that this was the type of analysis that CH2M Hill had been asked by USAID to provide, and is the



type of analysis performed in the absence of good data, adequate funding resources or sufficient lead time.

The relative risk assessment report was the sole deliverable stipulated under this task. The Contractor has indicated in the Updated Workplan that the required report was submitted as scheduled on February 28, 1995, and he considers the task to have been completed.

HIID plans to undertake intensive environmental risk assessments in several major Russian cities, including NVK, within the near future. The Team believes that this more exacting assessment should be used to confirm the environmental improvement priorities that have already been set for NVK.

**Task 3. Water Supply Management.** This task involves providing technical assistance, short-term training and limited commodity procurement to the NVK Vodokanal and the NVK Center for Sanitary-Epidemiological Control (SanEpi) to enable them to establish cost-effective methods for decreasing the level of contaminants in public drinking water and to strengthen the ability of their laboratories to monitor drinking water quality. The methodology and equipment for designing and maintaining a computerized database on water quality information has been provided to Vodokanal and SanEpi to help them detect bacteriological contamination on a continuous basis. NVK drinking water treatment generally removes only 80 percent of bacteria and pathogens. The target of NVK Vodokanal and SanEpi is to raise this level to 98 percent.

DO #10 deliverables completed to date for this task include U.S. awareness training in water treatment plant operations, data management, and water quality analysis, for management and technical experts of Vodokanal, and officials of the City Administration and SanEpi; the preparation of a report evaluating the needs of drinking water laboratories in NVK; a pilot public education program; an evaluation of the Dragoonsky water treatment plant; and the provision of software and training in developing an hydraulic model of the drinking water distribution system. Vodokanal will use the model to identify the location of water losses from its distribution system.

With EPT support, Vodokanal hosted a conference of drinking water professionals in Novokuznetsk in November of 1995, to introduce local water supply managers to the environmental benefits of the improved technologies provided NVK under the EPT Project. The conference had international participation. Approximately 50 percent of the cost of the conference was underwritten by the NVK Vodokanal.

Deliverables scheduled for 1996 include a conference to be held in May to address the issue of water disinfection. Managers from Kuzbass area utilities and SES (Sanitary Epidemiology Service) offices will participate in the conference. State-of-the-art U.S. computer software is currently being provided to the Dragoonsky Water Treatment Plant operated by Vodokanal in NVK to help it in monitoring, analyzing and controlling the processing of water through the plant. Flow meters are being installed at some of the city's industrial and residential facilities to determine the true level of water consumption and losses. Completion of this activity is expected in February 1996.

**Task 4. Air Pollution Reduction.** As noted earlier, the low stack emissions that emanate from the city's 160 district heating plants have been identified as constituting its most serious health risk because the particulates are discharged at low altitude in residential areas. The coal-

fired boilers in these plants do not have emissions control equipment. Kemerovo Oblast has 1,400 similar plants.

Deliverables to date under the EPT project have included the development of an air pollution database; upgrading the city's existing air quality monitoring system; developing air quality dispersion modeling capabilities in NVK; and providing U.S. training in visible emissions monitoring techniques and source testing procedures for Russian technical staff.

Activities to be undertaken in 1996 include the installation of air pollution and meteorological monitoring stations. The monitoring stations will be handed over to the NVK City Administration after field acceptance testing and staff training has been completed. The final version of EPA dispersion modeling software will be delivered to the City Administration at the beginning of the year. Work will continue through mid-1996 on the collection and entry of air pollutant source data for the emissions inventory. A least-cost approach will be employed to determine the most cost-effective strategy for reducing local air pollutant emissions.

The review of federal and regional air pollution regulations and policies that had been performed in 1994 will be updated during the first quarter of 1996, and effective means of improving compliance and enforcement will be studied throughout the remainder of the year. A U.S. consultant will develop a prioritized schedule for Visible Emissions (VE) testing of all significant sources of air pollution in NVK, and will assist in the development of a self-supporting VE training center. A conference on air pollution monitoring, atmospheric dispersion modeling, control technologies, training resources, and technology transfer will be held in Novokuznetsk in June 1996, for the purpose of displaying the technical and managerial capabilities in these areas acquired by the NVK City Administration, through EPT-funded activities.

**Task 5. Industrial Environmental Audits.** The strategy for implementing this task has been modified since the inception of the NVK component. Pursuant to DO #10, a first round of industrial environmental audits was conducted in 1994. Included were the city's two major steel complexes. The ferroalloys plant and aluminum refinery were scheduled to participate, but withdrew because of concerns that negative findings might constrain certain foreign investments that were being considered at that time from going forward. The auditors found major air pollution problems at both steel plants. Plant managers indicated that they were aware of the problems, but were unable to remedy them because of the cost involved in acquiring control technology and their lack of the funding needed to do so.

As modified, the focus of activities under this task was shifted to the emissions of most concern, i.e., those emanating from the city's 160 district boiler houses. EPT resources were concentrated on conducting environmental audits to identify the changes in operating practices, energy efficiency, or emissions controls that might be instituted by boiler house operators to reduce pollution. Also, on promoting efforts to reduce particulates through fuel switching, by inducing operators to use higher quality coal as fuel.

Deliverables to date under this task have included training Russians to conduct the audits, providing equipment for pollution reduction, and preparing a report on the results of the EPT-funded activities that will demonstrate the benefits of fuel switching, including an analysis of the costs and benefits of different fuel-shifting strategies.

A second round of energy efficiency audits was conducted at six boiler facilities in NVK in April 1995. An additional seventh audit was conducted in Kemerovo in October 1995. Emissions control equipment for the seven audited boiler houses is being procured under the EPT Project and is expected to be installed in early 1996.

A series of pilot tests to demonstrate the environmental advantages and cost-effectiveness of using clean coal and a more efficient burning process were scheduled to be conducted at three district heating sites in early November. The results of the tests are to be used to determine the feasibility of applying this approach to other boilers in NVK and the Kemerovo Oblast.

The results of the demonstration will be analyzed and presented in a report to be prepared during 1996. In addition to analyzing the costs and benefits of switching from low-quality coal to cleaner coal in existing boiler houses, the report will recommend changes in the current enforcement penalties policy and coal subsidy structure to make it economically preferable for boiler houses to switch to cleaner coals.

**Task 6. Sustainable Development.** The objective of this task, as set forth in DO #10, is to promote sustainable economic development by helping Novokuznetsk prepare and implement a realistic development strategy and by encouraging and supporting entrepreneurship.

**a. The 2010 planning process**

The first prong of CH2M Hill's strategy for assisting the city's restructuring efforts involves instituting and supporting the development of a "bottom up" planning process in NVK (the NVK 2010 Plan). Five Working Groups, consisting of 20-30 academic, community and business leaders, were formed to use U.S. approaches to generate community participation in developing the plan. The Groups focused on developing action programs in the areas of economic development, environment, public health, education and training, and public finance and management. Public support for the planning process was solicited through local TV and radio stations and the press. Contractor deliverables included the provision of U.S. technical assistance and training to help develop the planning process, and a final version of the plan.

After some initial success, the NVK 2010 planning process bogged down and has effectively been terminated. Under the Contractor's proposed Updated Work Plan, efforts will be made to link the objectives of 2010 and the project's environmental activities by redirecting a portion of 2010 funds to low-cost sustainable environmental initiatives growing out of Tasks 3-5, including self-sustaining business development.

**b. The business development effort**

The initial NVK Workplan notes that Novokuznetsk needs economic diversity to offset the expected future closure of the city's major industrial enterprises. The Contractor's strategy for helping the city achieve economic diversity is to transfer business skills to entrepreneurs to facilitate the development of small and medium-scale businesses, and to raise their success rate.

The Deliverables related to this task include setting up a self-sustaining Business Support Center (now called the American Center for Business Development) and preparing a report that documents the assistance needed: (1) to help initiate new businesses or to expand existing

operations through "incubator" and "matchmaking" programs, and (2) to help new and expanding businesses obtain financing from local sources or other donors.

The Business Center opened in September 1995, and has been well received by the community. A curriculum involving some 114 hours of training courses and seminars has been set up. Demand for the courses is strong. While the courses are free of charge at present, the Center plans to shift to a fee-for-services basis of operation within the near future.

**Task 7. Lessons Learned and Dissemination.** DO #10 stipulates that the Contractor disseminate the results, lessons learned, and techniques involved in successful NVK environmental improvement and business development initiatives to cities in Siberia and elsewhere in Russia, primarily through conferences and the use of videos. The Team has noted that these activities are to be dropped under the proposed Updated Workplan and this task eliminated from the Workplan.

### **III. FINDINGS**

#### **A. PROJECT MANAGEMENT**

The findings presented below are based primarily on Team interviews in NVK and Moscow with CH2M Hill and USAID staff involved in managing and implementing the NVK Subproject, and with subcontractors, officials of the City Administrator, NGOs, and other institutions and organizations involved in project-funded activities.

##### **1. Contractor staff are well-suited to the task of managing EPT-funded activities in NVK**

The staff fielded by CH2M Hill to manage project-funded activities in NVK are technically well-qualified and have proven adequate to the task of managing project-funded activities despite the difficulties of living and working in a geographically remote location under the constraining conditions of an economy in transition.

##### **2. Lines of authority and responsibility have been clearly drawn**

The Contractor's Workplans describe office and individual staff responsibilities in some detail, and include organization charts that show clearly the firm's lines of authority (who reports to whom), which are generally followed.

The Team was told that moving EPT contracting and technical representative functions to the USAID/Moscow Mission (in mid-1995) has been highly beneficial. Responsiveness and action on contracting, procurement and project management is now much more rapid and satisfactory to both the Contractor and USAID officials.

USAID/Moscow staff do not appear to be fully informed, however, as to the on-site assistance activities of the U.S.-based Task Managers operating in NVK. The extent of the work being done by the Task Managers to help the City Administration prepare proposals for the construction of a power co-generation plant is a case in point. Secondly, the roles being played by the Task Managers in giving advice to clients regarding the creation of private engineering service firms and private laboratories as spin-offs from project-funded initiatives in the air pollution, industrial audit and water supply improvement areas, needs to be clarified in order to avoid the potential for conflict of interest. Moving this function to the Business Center, as proposed in the Updated Workplan, would alleviate any such concerns.

##### **3. The Contractor's task-oriented approach to project management and implementation has been effective**

The level and type of work planning done by the Contractor through the development of detailed annual Workplans has had positive effects on the progress of work in NVK and has helped the Contractor forge close working relationships with AID/W staff and the USAID field mission in Moscow.

Though cumbersome and time consuming in preparation and despite the USAID's delay in granting approval, the initial Workplan has formed the basis for the steady dialogue on project activities and the close and productive working relationships that have emerged over the past

year between the Contractor's field offices in NVK and Moscow, and the USAID offices in Washington and Moscow.

The Contractor utilizes basic work planning and scheduling tools to assist in forecasting and implementing project events. The annual Workplans, in conjunction with the Contractor's periodic reporting requirements, provide a useful scheduling framework and help to facilitate the implementation process.

**4. The Task Managers have established close and effective working relationships with their clients, the USAID and host government counterparts**

Team interviews in NVK indicated that the Contractor's Task Managers have developed good working relationships with their clients, USAID staff, and City Administration officials.

**5. Communications and reporting are satisfactory**

Communications and liaison between the NVK Field Office and the Contractor's Regional Field Support Office in Moscow are satisfactory. The Field Office uses E-mail, fax and telephone facilities to communicate with the Contractor's offices in Washington and London. Periodic reports are used to ensure that information is passed in a coordinated manner. Senior Contractor staff were engaged daily in discussions with USAID officials concerning revisions to the EPT project's budget during the Team's visit to Moscow.

The Contractor prepares weekly, monthly, and quarterly reports on the progress of project implementation. The monthly reports were narrative in nature until mid-1995, when they were converted to a tabular format. Even with the improved format, however, the Contractor complained that the reports are not being read by the USAID staff to whom they are directed.

**6. Transportation and logistics are problematic**

Project implementation has been adversely affected by inadequate transportation and logistics. Air transport is the region's only reliable mode of transportation. Getting goods and equipment cleared through customs continues to be problematic.

**B. PROJECT IMPLEMENTATION**

**1. The major share of the deliverables due under the CH2M Hill contract have been delivered as of the mid-point of project implementation**

Under Task 1, which concerns project management, the first two of three annual workplans have been prepared and submitted. Quarterly reports on expenditures and accruals continue to be required. As noted earlier, the relative risk assessment report due under Task 2, has been submitted.

The technical assistance and training activities being implemented under Tasks 3-6 have virtually all been completed. Except for the equipment to be provided under Task 5 for use in conducting environmental audits, the technology transfers scheduled under the project have been completed. The deliverables remaining under Tasks 3-6 include mainly conferences to be held and reports to be submitted.

As indicated in the Updated Workplan, the Contractor proposes to drop the deliverables required for Task 7.

## **2. Cultural differences are a factor affecting implementation**

During an interview with one of the Contractor's Task Managers, it was noted that an initial cross-cultural adjustment period of 4-6 months (2-3 visits) is needed for technical assistance activities involving technology transfers to become useful and fully effective.

## IV. SUMMARY AND CONCLUSIONS

As noted at the outset, Novokuznetsk is one of the world's most heavily polluted cities. Water and air pollution levels are exceedingly high, and are causing serious health problems for a large share of the population. The city's efforts to improve these conditions are hampered by its near-total economic dependence on heavy manufacturing industries that are obsolete and barely competitive, and which are themselves major sources of pollution.

The EPT Subproject was conceived against this backdrop, as a means for demonstrating to city officials ways in which water and air pollution could be reduced and for identifying approaches that might be taken to ensure that such environmental improvement activities are sustained. Measured in these terms, considerable success has been achieved midway through the implementation phase of the Subproject.

The Subproject is coming up short, however, in one important respect: it has not as yet provided a development plan or strategy that addresses the broader issue of the economic sustainability of environmental improvements in NVK in general, as opposed to the selected initiatives being implemented under the Subproject.

Such a strategy is needed to guide the restructuring of the NVK economy, and to bring it to a level of performance that will allow for increased and sustained investments in environmental improvements. The NVK 2010 planning process, which was to have put together such a strategy, did not succeed in doing so, and has been abandoned.

As an alternative approach, the Updated Workplan calls for: (1) directing a portion of NVK Plan 2010 funds to low-cost sustainable environmental initiatives growing out of the implementation of EPT Tasks 3-5, including self-sustaining and profit-making business development initiatives (similar to those being undertaken by Vodokanal and SanTech, as cited below), and (2) assisting start-up businesses, and established businesses seeking to expand, in the development of third-party financing packages that will enable them to take advantage of investment opportunities with high environmental payback. This is certainly a sound approach, but it will take time before concrete results are realized, given the political, economic and cultural factors impeding business development efforts in NVK at the present time.

The implementation of EPT-funded activities appears to have gained considerable momentum within the past year as water supply improvement efforts have come to fruition, Business Center training activities have gotten underway, and noteworthy progress has been made in transferring the technologies that are to be used to reduce boiler house air pollution. Over the next year, the Business Center will bear much of the burden of implementation as it moves toward self-sustainability and takes on the task of assisting business start-ups. Increased attention will need to be focused on NGOs during the year, if they are to begin to play an expanded role in efforts to improve the city's environmental policy and regulatory framework.

Following is a brief assessment of the expected outcome of project-funded activities based on their continued successful implementation, and a summary of the Team's expectations as to project impact and the prospects for achieving sustainability.



**A. THE EXPECTED OUTCOME OF PROJECT-FUNDED ACTIVITIES AND THE REQUIREMENTS FOR CONTINUED SUCCESSFUL IMPLEMENTATION**

**1. All of the EPT project's main targets will likely be met before the expected completion date of the CH2M Hill contract in September 1997**

This assumes that current staff levels are maintained and that key management and technical staff remain on the job.

Among the more important targets within reach are an increase from 80 to 96 percent in the removal of bacteria and pathogens from drinking water at the Dragoonsky Water Treatment Plant; the establishment of an independent, for-profit water quality laboratory; the creation of an air pollution training center that is self-sustaining; the achievement of energy efficiency gains of 5-30 percent and particulate reductions of 10-35 percent at six municipal boiler houses; the creation of five new NGOs to assist in catalyzing community action on environmental issues; and putting the Business Center on a self-sustaining basis by March 1997.

**2. The Contractor's NVK office will need continued technical and logistical support from its Moscow office if it is to continue to implement project-funded activities effectively**

With the NVK project at its mid-point and with less than two years remaining under the CH2M Hill contract (one year, if the proposed updated workplan is approved), and taking account of the poor banking, housing and business support facilities in NVK, the Evaluation Team believes that it would not be cost-effective and would be unduly disruptive to modify the present Moscow-based management support structure, except for reducing the level of administrative and technical support provided by the Moscow office should project funding levels be sharply reduced in 1996 and 1997, as expected. The Team believes that the Contractor and USAID have already agreed where such cuts might be made.

The technical and logistical support being provided by the Moscow office to the NVK Project Office should be shifted to the Business Center once the NVK Project Office has been closed at the end of 1996, as proposed in the Updated Workplan.

**B. PROJECT IMPACT AND THE PROSPECTS FOR SUSTAINABILITY**

**1. Water supply management**

**a. The EPT project has successfully demonstrated various technological and operational approaches that might be taken to reduce health-related water pollution in NVK**

These include the establishment of cost-effective methods for decreasing the level of contaminants in public drinking water; the installation of equipment and training that will strengthen the ability of the Vodokanal and SanEpi laboratories to monitor drinking water quality; and the installation of improved methodologies and equipment for detecting bacteriological contamination on a continuous basis.

**b. Activities are being directed toward replicating and sustaining these approaches**

The Vodokanal hosted a conference in late 1995 that demonstrated to the operators of other Vodokanals in Russia the environmental benefits of the improved technologies and modern management techniques provided NVK under the EPT Project. It is now in the process of creating a subsidiary that will serve as a consulting and training center to help other water supply management agencies in Western Siberia replicate the NVK experience. The subsidiary will market, sell, and service U.S. technologies similar to those that the Vodokanal itself has received through the EPT Project. The Business Center is providing consulting and business training services to Vodokanal for this project.

The NVK City Administration, Vodokanal, and SanEpi have requested EPT assistance in establishing an independent water research laboratory which would serve users throughout the Kemerovo Oblast on a pay-for-services basis. A site for the laboratory has been selected. The target date for its establishment is December 1997. EPT is providing legal, organizational, and technical assistance in setting up the laboratory. Each of the parties has agreed to contribute start-up capital to augment funding being provided by the USAID to procure equipment under its Commodity Import Program. CH2M Hill technical staff are helping to set up the lab.

**2. Air quality improvement**

**a. EPT initiatives aimed at improving air quality in NVK are expected to have significant impact on the city's air pollution problems**

The initiatives address a key source of the problem, the city's coal-fired district heating boiler houses. The risk prioritization assessment conducted by the Contractor at the start of the project identified the 160 low-stack, high particulate boiler houses as the primary source of adverse health impacts. Available data indicate that the boiler houses, though minor users of fuel, constitute a disproportionately heavy source of air pollution.

Whereas the boiler houses account for less than one percent of total coal and energy consumption, as indicated below, they produce nearly 9.5 percent of the city's suspended particulates, 5.4 percent of carbon dioxide, 10.3 percent of nitrogen oxides, and about 7.4 percent of sulfur dioxide. Because of the low height of the boiler house stacks, they contribute an even greater level of pollutants, especially in the residential areas in which they are located. The effect of these emissions is compounded by the air inversions that affect the region during the winter season.

**Energy/Fuel Consumption in NVK (1990)**

**Tons of Coal Equivalent (000)**

<b>Source</b>	<b>Coal</b>	<b>%</b>	<b>Fuel</b>	<b>%</b>
Small DH boilers	53	1	53	1
Industry	3884	64	6253	73
Tom-Usinsk power plant	2084	35	2170	26

Total	6021	100	8476	100
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Fuel includes all types of energy used (gas, Mazut, secondary resources)

**Source:** NVK Heat Supply, Ministry of Energetics and Electrification

**b. Pilot tests being conducted under the project will likely prove useful in demonstrating to boiler house owners the environmental advantages of using clean coal and a more efficient burning process**

Analysis undertaken by the CH2M Hill team indicates that substantial reductions of air pollution can be accomplished utilizing specially sorted and prepared coal at the city's district heating boiler houses. Field tests based on this analysis were scheduled to be conducted at three district heating sites in early November, while the Evaluation Team was in NVK. The tests were delayed, however, pending arrival of the required equipment. The results of these tests will be used to determine the feasibility of applying this approach to other boilers in NVK and the Kemerovo Oblast.

The results of the field tests are to be summarized in a report to be prepared during 1996. The report will analyze the costs and benefits of switching from low-quality coal to cleaner coal in the existing boiler houses. It will recommend changes in the current enforcement penalties policy and coal subsidy structure to make it economically preferable for boiler houses to switch to cleaner coals.

**c. Further analysis is needed to demonstrate the cost-effectiveness of using clean coal**

The Team noted that although the Contractor's analysis shows that positive economic advantages will accrue from using prepared coal in heating boilers to reduce air pollution, further analysis is needed to confirm the validity of the prices used in the analysis, particularly for coal supplied to boiler houses owned by the coal mines.

Economic and financial analysis of the coal industry in Russia is complex because the industry, which is in the process of restructuring, is heavily subsidized. The extent of subsidization is not yet known. Miners from the Kuzbass, one of the largest centers of coal mining activity in Russia, were catalysts in the recent national coal strike seeking wage settlements that would require continued, and possibly higher, subsidies. A recent World Bank study suggests that three-fourths of the mines are not competitive, and may be forced to close if the industry is in fact restructured.

The earning potential of the region's coal resources is also a factor to be considered. Coal produced by Kuzbass mines is high quality, bituminous coal. Over 75 percent of the coal produced is marketed to other parts of the country or exported for hard currency. Given the region's scarcity of marketable resources, this puts a premium on the value of the coal and on its price.

Most of the coal used in NVK for direct residential heating or for local district boiler houses is low quality coal. The EPT approach of shifting to a higher grade of coal to reduce air pollution emanating from the city's residential boiler houses would preempt the region from using the higher grade coal for export. While the quantity of coal involved would be modest,

the difference in the unit cost (per ton) could be considerable and prohibitive from a boiler house owner's point of view.

Until the larger regional and national questions are settled, and legitimate market prices for coal are established, the validity of the Contractor's analysis of the economics of coal switching remains questionable. Such analysis depends upon adjustments in prices and subsidies that have not yet been made, and that may not be made during the term of the EPT project.

**d. SanTech will play a key role in assuring the successful replication and sustainability of the project's air pollution reduction efforts**

SanTech, a local boiler engineering firm whose technical staff participated in the EPT audit and energy efficiency programs, has requested EPT assistance in establishing a private Energy Service Company (ESCO). Once established, ESCo will seek to make a profitable business of auditing and fine-tuning boilers for owners looking to reduce costs, thus spreading improvements from the six boilers in NVK audited under the EPT project to the remainder of the 160 located in the city. Equipment needed to provide energy efficiency services (used in the audits) would be provided SanTech to assist them in establishing ESCo. The Business Center would assist in the preparation of a business plan.

A Team interview with the prospective managers of ESCo indicates that they will need considerable assistance to get the firm going.

**3. The diversification of industry and economic sustainability**

**a. As indicated in the updated workplan, considerably greater emphasis needs to be put on business development and diversification to ensure economic sustainability in NVK**

Establishment of the Business Center has been a successful venture to date. Demand for the comprehensive set of business development training courses and seminars that the Center is offering has been strong. The Center is in the process of identifying the series of steps that it will need to pursue to attain financial self-sufficiency. A local organization, the NVK branch of the Federal Unemployment Service, has indicated its willingness to commit funds to the venture.

According to the Center's local business consultants, the fledgling NVK small and medium-scale business community is solidly behind expansion of the EPT Business Center and its environmentally-sound business development support activities. A better sense of the importance placed on these activities will be manifest once the Center starts charging fees for the training courses and seminars it is offering.

Team interviews with the Center's expatriate director and two business consultants indicate that a sound basis is being laid for putting the Center on a self-sustaining basis. It remains doubtful, however, whether the financial resources needed to operate the Center at a level of activity that would contribute significantly to the city's economic transformation, will be forthcoming in the near future.

The Team endorses the considerable emphasis given in the Updated Workplan to broadening the range of the Center's business development and support activities. At the same time, we believe that USAID assistance will be needed beyond March 1997, the date proposed in the Updated Workplan for terminating such assistance, if the broader range of activities is to be accomplished.

**b. The sustainability of EPT-funded activities and their replication is contingent upon finding additional outside sources of finance**

Lack of finance was cited by virtually everyone interviewed by the Team as being the chief obstacle to the economic sustainability and replication of EPT initiatives. The banks in Novokuznetsk have limited knowledge of the role that the financial sector can play in business development and, accordingly, are not supportive of entrepreneurs. EPT Task Managers have begun to help the City Administration prepare proposals to obtain needed loan funding or guarantees from the World Bank, the European Bank for Reconstruction and Development (EBRD), and the U.S. Export-Import Bank. Under the Updated Workplan, the development of proposals aimed at obtaining needed funding from local as well as outside sources will be taken up by the Business Center.

**4. Community participation in NVK environmental improvement activities**

**a. The EPT demonstration projects coupled with project-funded training activities have enhanced the administrative and technical management skills of most of the city's key players in environmental improvement programs**

The key players include the City Administration, Vodokanal, the NVK Center for Sanitary-Epidemiological Control, and SanTech. The knowledge and skills imparted to these agencies will be passed along as they create in-house subsidiaries, and independent laboratories or private sector consulting services firms.

**b. The project is having limited impact on community commitment to environmental initiatives and on community involvement**

Increased community commitment to environmental initiatives and community involvement was one of the goals of the 2010 planning effort which has been aborted. Given the city's scarcity of government revenues and private capital, environmental activities must compete with job creation and other economic development activities for public support and funding.

There is very strong support among City Administration officials for the water resources improvement and air pollution reduction initiatives of the EPT project. However, Team interviews with Business Center staff indicate that the general public in NVK is predictably less supportive, particularly when public funds are being used for environmental improvement activities rather than job creation activities.

**c. Steps that might be taken to increase public awareness of the need for environmental improvement**

The success of ventures such as the recent NVK conference on drinking water will encourage greater public awareness of the needs and benefits of environmental improvement activities.

It can be expected that considerable attention will be focused on the national conference on drinking water disinfection issues to be held early in 1996.

**d. City Administration proposals to effect environmental improvements**

During its interviews with city Administration officials involved in environmental improvement efforts, the Team was apprised of several activities that appear to merit some form of EPT assistance. Providing such support would help to solidify the environmental gains that have been made to date under the NVK Subproject and would provide a basis for ensuring that such efforts will continue to be pursued well after the project has ended.

According to City Administration officials, the city's water treatment plants lose 40 percent of treated water during distribution. Vodokanal officials estimate the amount lost at 7-8 percent within their facilities. The remainder is lost in the city's water distribution system and at industrial plants. Downstream infrastructural improvements are needed before the full impact of improvements in water quality can be realized, given the amount of water being lost. Consideration should be given to providing EPT technical assistance and funding resources to enable the City Administration to assess what would be required to rectify the problem.

In addition, City Administration officials have suggested that replacing the 160 small, heavily polluting residential district heating boilers with a single large co-generation power plant producing both electric power and associated steam for the district heating system, would provide a more energy and environmentally efficient solution for the city's low-level pollution problem. Again, the Team believes that it would be an appropriate use of EPT resources to help the City Administration develop a proposal to obtain the funding or guarantees needed to implement this activity. The Team has noted that proposal development of this kind and scope is an activity that will be taken up by the Business Center under the proposed Updated Workplan.

**e. NGO efforts to improve the city's policy and regulatory framework**

As noted by the Contractor in the Updated Workplan, there is no clear regulatory authority in Russia at the city, oblast, or federal level, and ministries and agencies are still compartmentalized as an artifact of the former Communist regime. This pervasive lack of authority is hampering efforts to improve the environmental policy and regulatory framework in NVK.

NGOs, which have been at the forefront of efforts to establish public policies and a legal and regulatory framework for NVK, could play a greater role if properly supported. The NGO community is small, and has limited resources and influence. A major effort is needed to bolster its standing and improve its effectiveness.

The Updated Workplan has included the establishment of an NGO Support Center as one of the immediate, low-cost, concrete steps it proposes to implement to follow up on the 2010 planning process. The Center will help to support existing organizations and to create new NGOs which are focused on environmental and health concerns and which are prepared to participate in legislative, regulatory, and lobbying initiatives in support of environmental goals.

## **V. RECOMMENDATIONS**

### **A. FOR CH2M HILL**

#### **1. Develop a realistic time-phased plan or model for the achievement of economically feasible levels of sustainable environmental improvement in NVK**

The levels of environmental improvement that can be achieved in NVK through EPT-funded activities will be limited compared to the city's requirements. The NVK Subproject, by design, is a limited technical assistance and training activity of very limited duration.

A useful output of the EPT Subproject would be to provide city officials with a realistic assessment of the resources needed to achieve economically feasible levels of improvement, one which contains suggested approaches as to how these resources might be obtained, the timeframe that would be needed to implement such a program and, most importantly, whether the greater effort would be worth considering, given the city's financial situation.

#### **2. Re-examine the assumptions in the proposed Updated Workplan regarding closure of the NVK Subproject**

The assumptions in the Workplan indicating that the NVK Subproject will be essentially completed by the end of September 1996; that the assignments of expatriate NVK staff will be completed by 30 September 1996; and that the Business Center will require no further USAID funding beyond March 1997, appear optimistic.

The city will continue to need assistance to support its efforts to improve its water supply system. EPT initiatives aimed at improving air quality in NVK will provide, at best, a partial solution to the city's air pollution problems. The city's lack of public revenues and private capital could effectively undermine efforts to sustain the project's successful pollution reduction activities and its ongoing efforts to diversify business enterprise.

#### **3. Take steps to ensure that the results of the air pollution tests to mitigate pollution through improved coal consuming technology are carefully analyzed; that technical and economic criteria are met; and that the process is competitive and can be replicated in other facilities in NVK and the Kemerovo region**

### **B. FOR USAID**

#### **1. Shift EPT water and air pollution reduction activities in NVK onto a consolidated "program" basis of implementation**

These activities have outgrown their EPT task status. Required systemic improvements extend well beyond replicating "demonstration" models. The USAID should consider providing dollar grant funds and counterpart funds (from the CIP program) directly to the City Administration to plan and implement the proposed consolidated program. This would greatly strengthen the city's capacity to engineer further sustainable

improvements. As required, the city could in turn contract with a private firm for technical advisory services.

**2. Extend the present contract, as necessary, to enable CH2M Hill to continue its efforts to assist NVK in diversifying its economy by promoting environmentally sound business enterprises**

Given the city's difficult financial situation, it is doubtful as noted earlier that the financial resources needed to operate the Business Center at a level of activity that would contribute significantly to the city's economic transformation will be forthcoming in the near future. USAID assistance will be needed beyond March 1997, the date proposed in the Updated Workplan for terminating such assistance, if the broader range of activities outlined for the city in the Updated Workplan is to be accomplished.

**3. Expand the participation of NGOs in NVK environmental and economic restructuring initiatives**

The view of USAID staff that NGOs in NVK have limited capabilities and that their participation in EPT-funded activities should be defined as an advocacy role, is short-sighted and should be revisited.

The Updated Workplan has included the establishment of an NGO Support Center as one of the immediate, low-cost, concrete steps it proposes to implement to follow up on the 2010 planning process. USAID should encourage the Contractor to use EPT funding and training resources to strengthen the capacities of NGOs to participate in NVK environmental improvement and economic restructuring initiatives.

**4. Ensure that the results of the proposed HIID risk assessment are circulated to all agencies and industrial firms involved in pollution reduction activities**

This more exacting assessment should be used to confirm the priorities that have already been set in NVK.

**5. Ensure that the success of ventures such as the recent conference on drinking water are widely publicized**

This will encourage greater public awareness of the needs and benefits of environmental improvement activities, and the impact of such improvements on their health and longevity.



**ANNEX 2B**

**EVALUATION OF THE NIS/EPT PROJECT**

**SUB-TEAM FOR RUSSIA**

**REPORT ON EPT ACTIVITIES IN RFE - 2/29/96**

# **I. INTRODUCTION**

Russia's forests contain some of the world's most important timber reserves. They account for nearly a quarter of the world's forest and timber volume, and constitute a critical global resource in that they help offset the carbon dioxide loading of the atmosphere from fossil fuel combustion. Despite their economic and environmental importance, the forests are being poorly managed. The forests of the Sikhote-Akin, for example, which have been characterized as Russia's most biologically diverse terrestrial area, are being threatened because of the RFE region's difficult economic situation. A perceived lack of immediate alternative development options in the region is generating pressures for wasteful commercial exploitation of the forests.

The RFE Sub-Project (the Russia Far East Sustainable Natural Resources Management Project) is being carried out under the auspices of USAID's Environmental Policy and Technology (EPT) Project. The purpose of the EPT activities being funded under the Subproject is to enhance Russian efforts to overcome the management and conservation problems affecting the RFE region's forests, and help move the region onto an environmentally sustainable economic development and growth path. In addition to a consortium led by CH2M Hill, which is the prime contractor for the EPT Project, other implementors being funded by USAID include the U.S. Forest Service (USFS), Harvard Institute for International Development (HIID), ISAR (formerly the Institute for Soviet-American Relations), and the World Wildlife Fund (WWF).

The starting point in evaluating CH2M Hill's management of the Subproject is to note that project-funded activities are spread over a vast geographic area; the Workplan includes 22 major project tasks and encompasses some 250 sub-tasks; and more than 50 Russian institutions, including government agencies, research institutes, private sector enterprises, community organizations and NGOs, will be participating in EPT-funded activities as the project is being implemented.

Secondly, the Subproject was expanded late in its initial design stages as a result of the Gore-Chernomyrdin Commission (GCC) consultation process, from a modest \$3.0 million project narrowly focused on fire prevention and control to a \$15.5 million project covering a broad range of sustainable forest management and biodiversity conservation activities. This expansion necessitated an immediate overhaul of the Subproject Workplan which had been nearing completion, and imposed requirements for hiring additional technical staff that have been difficult to meet.

Further, as noted in the Workplan, the project is being implemented at a time when there is a high level of economic insecurity throughout Russia; government agencies and institutions have serious financial problems; the legal and institutional framework, including that applied to forest management, parks, and protected areas, is in a state of flux; and vested managers are intent on keeping control of formerly government-owned forest enterprises.

Because of such constraints, the RFE program has been a slow starter. A recent USAID status report on the program indicates that steady progress is now being made, however, and results are beginning to show. An updated and revised Workplan prepared in late 1995 indicates that virtually all of the activities funded under the Subproject will be completed as scheduled by the end of the CH2M Hill contract in September 1997.

## **A. THE OBJECTIVES OF THE SUBPROJECT**

The objectives of the RFE Sub-Project, as set forth in Delivery Order No.11, are: (1) to promote environmentally sustainable forest management in the Khabarovsk and Primorski Territories of the Russian Far East, and (2) to protect critical habitats and endangered species in the Sikhote-Alin Mountain region.

## **B. CONTRACTOR ORGANIZATION AND STAFFING**

As provided in the Delivery Order, the Contractor has established field offices in Vladivostok and Khabarovsk, the centers of the two Krai involved in the RFE project. An expatriate Project Manager, located in Vladivostok, is the principal representative of the Contractor throughout the RFE subproject area. He maintains liaison with the Vice Governors of the Krai and runs the daily operation of the Vladivostok office. An expatriate Site Manager in Khabarovsk conducts the day-to-day operations of that office, under the direction of the RFE Project Manager. Both offices represent the USAID Mission's only permanent RFE presence for its environmental assistance program and, accordingly, provide logistical support and a focal point for other EPT contractors and cooperators working in the region.

Other expatriate staff in the Vladivostok office include a Biodiversity Task Manager and a (proposed) Writer-Editor. Key Russian staff in the Vladivostok office include an Office Manager, Translator, Community Development Specialist, Small Enterprise Development Specialist, and Senior Scientist.

In addition to the Site Manager, an expatriate Forester (who has just been recruited) is assigned to the Khabarovsk office. Russian staff include an Office Manager, Translator, Secretary and Drivers.

The RFE Project Manager reports to the Contractor's EPT Regional Director in Moscow. The Moscow office supports RFE operations by providing administrative and financial management assistance; technical expertise in law and policy, training and institutional development; and liaison with the USAID Mission, the Ministry of Environmental Planning and Natural Resources (MEPNR), and other Russian Government agencies involved in environmental and forestry programs.

A senior member of the CH2M Hill staff, resident in the U.S., serves as the EPT Project Coordinator for the RFE (as well as for NVK and the Regional Field Support office in Moscow) and is responsible for U.S.-based project coordination and direction of the Contractor's involvement in RFE activities. On the Russian side, coordination of EPT activities is effected by the Project Coordinating Committees (PCCs) of the Khabarovsk and Primorski Krai, which operate under the direction of the Vice-Governors of the two Krai.

A detailed Workplan covering EPT activities to be implemented in 1995 by the contractor, was written in January and revised in April of 1995. A revised Workplan covering implementation during the period January 1, 1996 through September 30, 1997, was prepared recently and has been submitted to the USAID for approval.

## **C. SUBPROJECT COMPONENTS**

Delivery Order No.11 and the 1995 Workplan classify the main tasks to be carried out under the RFE Sub-Project in terms of three components, as follows:

### **1. Institutional development**

The activities being implemented under this component are intended to set the stage and facilitate the implementation of the two other components, by fostering the development and adoption of policy changes that will encourage public and private sector use of sustainable forest management practices, and by promoting community involvement in natural resource conservation and biodiversity preservation programs. The purpose of these activities is to strengthen the policy and institutional framework for sustainable natural resources management in the RFE.

### **2. Sustainable forest management**

The activities being funded under this second component are designed to increase the total value of products extracted from the region's forests while reducing the negative ecological impact of the extraction process. The purpose of the activities is to promote environmentally sustainable forest management in the Khabarovsk and Primorski Territories. The overall objective is to promote and sustain forest-based industries while maintaining adequate stocks and ecological balance.

### **3. Biodiversity conservation management**

Activities under this component involve getting immediate action focused on preserving critical habitats in the Sikhote-Alin region and introducing management practices that will ensure their future preservation. The purpose of the activities is to enhance the protection of endangered species.

## **D. PROJECT FUNDING**

Total USAID funding for the EPT/RFE Subproject is approximately \$15.5 million. The consortium led by CH2M Hill is the largest U.S. implementor, with funding under Delivery Order No.11 of \$9.35 million. As the lead contractor for the EPT/RFE Subproject, CH2M Hill is responsible for providing overall coordination and direction to all U.S. and Russian implementors funded under the Subproject.

As of the end of September 1995, \$1.5 million of the \$9.35 million funding provided CH2M Hill for the RFE Subproject had been spent, leaving a pipeline of \$7.85 million.

## II. THE STATUS OF SUBPROJECT ACTIVITIES

The revised RFE Workplan has classified Subproject tasks and related activities into five categories, as follows: (1) policy and institutional framework; (2) regional planning and strategies; (3) institutional strengthening and public awareness; (4) sustainable forest management; and (5) bio-diversity conservation management. The Contractor's monthly reports on the status of Subproject activities use the same breakdown.

While these five categories do not conform to the three-component breakdown used in DO #11 (the first three categories are subsets of the DO's first component), they provide a convenient and more relevant basis on which to analyze the status of Subproject activities.

The following sections summarize the status of Subproject activities based on the Contractor's monthly Status Reports for September and October 1995, and Team interviews in November with Contractor and USAID staff, CH/EPT consortium members, and Subproject participants and beneficiaries in Vladivostok, Kharbarovsk, and Moscow during the Team's 12-day visit to the region. A more detailed task-by-task summary of progress to date and current issues relating to implementation of the Subproject is contained in the Quarterly Review Report for the Fourth Quarter of 1995, which was circulated in early February 1996, by the Contractor's Regional Field Office in Moscow.

**Tasks 1-4. Policy and institutional development.** The expected outputs of Tasks 1-4, as indicated in DO #11 and the RFE Workplans, are: (a) legal and regulatory analyses; (b) improved information management; and (c) other policy and institutional outputs to encourage sustainable and economically more beneficial management of the region's wood- and non-wood forest resources. HIID is primarily responsible for the successful implementation of this set of tasks, with the support of the Contractor and the USFS. Tasks 5-7, which had been included in an early version of the 1995 Workplan, were merged with Tasks 1-4 in the final version and deleted.

To date, HIID has produced final reports on RFE forest resource problems and is conducting analyses to provide a basis for proposing changes in policies that would alleviate these problems. EPT staff are working with Russian counterparts on specific policy issues; e.g., draft forest legislation currently pending before the Kharbarovsk region parliament. An environmental economics training course was held in Vladivostok in November to expose key community leaders to the democratic processes generally used to identify and resolve policy problems.

The principal policy and institutional development tasks that remain to be implemented include information system improvements and the design, monitoring, and evaluation of policy reform tests based on analyses undertaken to date. Public meetings will then be held to discuss the proposed policy changes.

**Tasks 8-11. Regional planning and strategies.** Key outputs expected from Tasks 8-11 are: (a) biodiversity strategies for the Sikhote-Alin area as a whole and for each Krai; (b) regional land use plans for each Krai; and (c) the demonstration of multiple-use planning and management in four raions to balance the use of the region's forest for economic purposes with the protection of critical habitats. The Contractor, with assistance from the WWF, is responsible for carrying out these tasks.

To date, Project Coordinating Committees (PCCs) have been established in the Primorski and Kharborovski Krai and are operational. In addition, a Joint Committee and Regional Planning Council are currently being chartered. The main purposes of these institutions are to generate increased community involvement in and support for the development of biodiversity strategies and regional land use plans, and to promote public discussion of policies related to land use and biodiversity preservation. Public Advisory Committees, which are to constitute a third defined point of public involvement in the regional planning process, have not yet been set up.

Work has begun on regional biodiversity, land use and resource management strategies. The preparation of landscape-level and stand-level forest management plans is underway. Landscape plan data have been gathered. Data entry training has been completed. A contract has been let with the International Mountain Research Center to produce a forest cover map for biodiversity planning. Computers and printers have been delivered and set up for the Chuguevsky Planning Team. A sub-contractor has begun digitizing a map for the Chuguevsky Rayon.

Rayon-level integrated resource planning and management demonstrations are ongoing. A broadly representative planning process has been established. Key local and regional officials are actively participating in the process.

Remaining activities include digitizing additional maps to support the further implementation of regional planning and biodiversity conservation tasks; conducting follow-up training for data input personnel; finalizing the tiger census; and conducting a bear study. The Contractor's Fourth Quarter 1995 Report has noted that, when it has been completed, the tiger census will provide information critical to numerous decisions on forest management, as well as raising the level of public support for biodiversity protection.

**Tasks 12-17. Institutional strengthening and public awareness.** As noted in the Contractor's Workplan, the purposes of the project's institutional strengthening and public awareness activities are to provide a basis for improved natural resource and decision-making and to promote environmental protection through democratic processes. ISAR's programs within the RFE Subproject are designed to foster an active and sustainable NGO sector that can ensure citizen participation in EPT project activities and that will help to promote biodiversity and sustainable natural resource use. PERC is also involved in implementing activities included under this set of tasks, specifically those activities that are aimed at strengthening the environmental policy and planning capacities of Russian government organizations.

The key outputs expected from this set of tasks are: (a) seminars and workshops for NGO and public participation development; (b) study tours for government officials, NGOs, and specialists; and (c) grants to support NGO development and environmental education efforts.

Regional Environmental Centers have been established and are operating. The Centers provide critical information and materials to local NGOs. Five environmental education and NGO strengthening seminars have been held, with participants attending from across the RFE. The NGO environmental grants program is fully operational. Two tranches of small grants have been awarded to NGOs. Preparations are underway for a third round of grants.

Key tasks still to be accomplished include the development of an NGO database; providing equipment and supplies for environmental education programs; and assisting with the

production and distribution of radio, TV, and press releases on the status of ongoing RFE biodiversity and sustainable forest use activities.

**Tasks 18-22. Sustainable forest management.** Expected outputs include: (a) practical field assistance in sustainable forest management and forest regeneration, including the provision of seed processing and greenhouse facilities; (b) support for improved forest fire management, including improved planning tools, public education, and equipment and other fire-fighting support; (c) direct investment, through a Small Enterprise Fund, in financially and ecologically sustainable small and medium-scale, community-based enterprises; and (d) providing assistance to larger sustainable enterprises to attract joint venture partners or outside financing. The Contractor, along with the USFS, is responsible for implementing Subproject-funded activities directed towards achieving these outputs.

To date, reforestation equipment and assistance have been provided for the operation of a Russian-designed greenhouse and seed processing facility near Khabarovsk. Firefighting equipment has been delivered to the Russian Forest Service (RFS). The USFS has completed radio needs assessments in both regions. The Khabarovsk portion of fire behavior training has been completed, and development of a fire fighting training module is underway. Fire prevention teams are on the ground in Khabarovsk and Vladivostok, doing risk assessments and discussing fire prevention planning.

Activities still pending include the provision of GIS equipment and training to the Russian Forest Service; providing technical assistance for seed collection and plantation establishment and maintenance; and conducting a workshop on Kedra (Korean Pine). Two one-week business development seminars were scheduled for December. The team was recently informed that, after some delay, the USAID has decided to provide \$1 million to the Small Enterprise Fund.

As for Contractor efforts to assist in attracting joint venture partners or outside financing, the first phase of an assessment of forest-based industries in Primoria has been completed and a similar assessment in Khabarovsk is underway. CH2M Hill staff are networking with a series of forest industry organizations to promote an understanding of EPT Project objectives among industry leaders and associations. Work is also continuing in concert with Deloitte Touche and the Eurasia Foundation regarding the development of start-up enterprises in the wood products and wood processing industries. Potential U.S. interest in introducing sustainable forest harvesting techniques is being explored. Discussions are underway with possible financing sources.

Small business training workshops have been conducted in Khabarovsk and Vladivostok. Follow-up assistance is being provided to some of the more promising enterprises. Training has been provided to mushroom processors, resulting in a commercial drying operation.

**Tasks 23-25. Bio-diversity conservation management.** The outputs expected from this set of tasks include: (a) strengthening existing protected areas by generating alternative employment opportunities in surrounding communities and providing assistance to support the establishment of new protected areas and anti-poaching activities; and (b) the establishment of a Conservation Trust Fund. The WWF and PERC, under a subcontract with WWF, are collaborating with CH2M Hill in implementing these tasks.

Regarding progress to date, the Contractor has provided assistance to Primoria in demarcating and proposing to Moscow the designation of four new nature reserves/parks as National Parks. In addition, technical assistance is being provided to existing reserves and the procurement of needed equipment is underway.

PERC is continuing its efforts in the Khor and Bikin regions to gain support for community projects. CH2M Hill staff are working closely with the Governor's indigenous peoples' representative in implementing this task. A community development workshop was held in Bikin recently. A WWF proposal to start up the Conservation Trust Fund was recently approved by the USAID, although at a reduced level of funding (\$1 million).

Important remaining tasks include strengthening protected area management and anti-poaching programs; providing technical and financial assistance for six zapovedniks (federal reserves); training zapovednik ranger staff; creating a long-term management plan for each zapovednik and a unified system for monitoring natural ecosystems; and establishing a scientific information center.

Action is also needed to assist communities in creating conservation committees (or some other community-based group) to facilitate bio-diversity conservation projects. Also, the need for WWF to field an RFE manager who has sufficient authority to manage Tasks 23-25 has been noted in the Fourth Quarter 1995 Report.



### **III. FINDINGS**

#### **A. PROJECT MANAGEMENT**

##### **1. The Contractor's approach to project management**

The Contractor's approach to project management is to utilize the management structure that has been put in place, as outlined in Section I.B. above, to carry out the various tasks and related implementation activities prescribed in the Contractor's annual Workplans. These activities include providing short-term technical assistance, some equipment, and limited commodities to Russian agencies and institutions engaged in forest management and biodiversity conservation programs; sponsoring conferences and workshops; setting up demonstration projects; and conducting training seminars.

As indicated in Section II above, the Contractor manages project activities as either the lead contractor of a consortium of EPT contractors or in collaboration with other implementors who are funded separately by USAID and who generally have access to additional funding from their own or other sources.

The Contractor's practice of prescribing in some detail in a Workplan the tasks and subtasks to be completed and the indicators and targets to be achieved, and then working within specified timeframes to accomplish these tasks and targets, has not worked as well in the RFE as elsewhere, at least in the initial stages of project implementation.

Slippages in getting the project started, the vastness and unfamiliarity of the territory being covered, difficulties of recruiting qualified Russian and expatriate long-term staff, the substantial number of tasks and subtasks identified, and the need to establish effective first-time collaborative working relationships with other, mostly self-sufficient implementors, have been the main contributing factors. Moreover, as noted by a member of the USAID staff, setting a tight implementation schedule is generally not a suitable approach to achieving long-term institution building objectives in a cross-cultural setting.

During Team interviews, Russian staff were critical of the excessive number of U.S. specialists that have been involved in program design and planning activities and the short time that staff members themselves were used. In responding, the Contractor noted that substantial efforts have been made and are being made to engage both government officials and private individuals in work planning and execution, but the success of these efforts has been mixed. Many Russians, who are highly educated and who have extensive experience, have been considered for employment but, being Government employees, were not available for the time and intensity required. Further, their inexperience in conducting required analyses and in preparing the types of plans and budgets required by the Contractor and USAID, has made it difficult to engage them in work planning and execution. A large and well-qualified staff of Russians are currently participating in the project, however, and the Contractor is continuing to expand this category of staff.

A consistent request from the Russian side has been for the Contractor to reduce the use of short-term consultants in favor of long-term staff with whom they can expect to have a continuing relationship. Where activities are of short duration or sporadic in nature, short-

term consultants are being retained and the same consultants are being brought back, whenever possible, in deference to the Russian side.

## **2. The management structure and staffing**

The management structure that has been put in place for the RFE by the Contractor appears adequate to the tasks being implemented by CH2M Hill as the lead contractor of the CH/EPT consortium. According to the Contractor, the staffing positions reflected therein represent the minimum level of long-term staff necessary to accomplish planned work in the RFE.

The Team concurs in the Contractor's assessment of the adequacy of the staff in place, except to note that interviews with the CH2M Hill Project Manager in Vladivostok and the Site Manager in Khabarovsk, had indicated that the RFE field offices between them needed two additional expatriate technical staff: a forester for the Khabarovsk office and a community relations specialist for Vladivostok. It was suggested at the time that the community relations specialist would not be needed if funding for the Enterprise Development Fund was not approved (it has been). The forester has since been hired and began working in February 1996.

The Team was told by Russian staff in the Vladivostok office that significant and continuous progress has been made in the management of that office, following the arrival of the present Project Manager in February 1994.

## **3. Staff recruitment**

The Contractor has not been able to recruit the professional and technical staff needed to implement certain important project activities on a timely basis. Living and working conditions in the region make recruitment difficult. Also, as noted earlier, finding staff with the right qualifications can be difficult.

## **4. Reporting**

The Contractor prepares weekly, monthly, and quarterly sets of project implementation reports for the RFE. Copies of reports provided the Team indicate that the following two monthly reports pertaining to the implementation of EPT activities in the RFE are being prepared by the Contractor and distributed:

(a) A monthly report on Program Status which includes an initial lead column listing the RFE Subproject's 22 tasks (sorted, per Section II above, into five categories or components), and five other columns identifying or citing for each task: the key activities being implemented; major implementation accomplishments during the month; outputs produced during the month; upcoming outreach opportunities and plans for the next two months; and progress in achieving impact indicators or targets.

(b) A monthly Summary of Program report accompanying the Program Status report, with a similar lead column listing the RFE Subproject's 22 tasks, and three other columns identifying or citing for each task: impact/indicators; targets; and key activities.

The Team was also provided formats for two other reports which the Contractor proposes to produce as new reports or replacements:

(a) An EPT Monthly Project Output Report which includes a lead column listing the RFE Subproject's 22 tasks and 133 associated subtasks, and four other columns identifying or citing for each task: activities and outputs; funds budgeted; time schedule (showing dates under subcolumns headed plan, progress to date, and progress this month); and comments/obstacles encountered.

(b) An EPT Project Quarterly Output Report which includes a lead column listing the RFE Subproject's 22 tasks and 133 associated subtasks, and six other columns identifying or citing for each task: activities and outputs; responsible implementor; project to date (plan/actual); this quarter (plan/actual); next quarter (plan); and comments/obstacles encountered.

In addition, the Team was told that new USAID reporting procedures initiated under the Agency's Monitoring and Reporting System (MRS), require the submission of quarterly reports on project indicators, targets and accomplishments to date. USAID and Contractor staff in Moscow were generally agreed that these new procedures will facilitate their joint efforts to monitor progress toward the achievement of project objectives.

The Quarterly Review Report prepared for the Fourth Quarter of 1995, and referred to earlier, provides a very useful and informative overview of task implementation to date and issues to be addressed. The Report was designed to support the EPT/RFE Quarterly Review meeting that was held in Vladivostok on 13-14 February 1996. The EPT Project Quarterly Output Report for the Fourth Quarter 1995, described above, has been incorporated in the Quarterly Review Report for the same period and presumably will not be issued separately.

The Team believes that monthly reporting on implementation accomplishments; outputs produced (during the month); upcoming outreach opportunities/plans for the next two months; and progress in achieving impact indicators and targets, is excessive. Quarterly reporting on these items would be adequate for the purposes of project management. Presumably, the new quarterly MRS report will supplant the current monthly Summary of Program report. If not, it should.

## **5. Transportation and logistics**

Project implementation has been adversely affected by inadequate ground transportation and logistics. Air transport is the region's fastest and most reliable mode of transportation. Railway transport is also reliable, but time-consuming. Getting imported goods and equipment cleared through customs in a timely manner remains problematic in the RFE, as elsewhere in Russia.

## **6. The Contractor's working relationships with the USAID and with host government officials**

Working primarily through the Field Support Office in Moscow, Contractor management and technical staff in the RFE have established good working relationships with USAID staff. The Team noted from its review of office files that numerous meetings are held in Moscow on a regular basis between USAID staff and the Contractor concerning RFE project-related matters such as staffing, budget and program operations. In addition, USAID staff have made numerous trips to the RFE for purposes of project oversight and guidance to the Contractor, as well as to other agencies involved in EPT activities.

Team members had several opportunities during their short visit to assess the Contractor's working relationships with host government officials. It is evident from Team interviews, and from the extensive involvement of the PCCs in project-related activities, that excellent relationships have been established, particularly at the Vice Governor level.

## **7. Coordination with other EPT implementors**

As indicated in Section II above, CH2M Hill is collaborating with several other EPT implementors in fulfilling the many and varied tasks of the RFE Subproject. Team interviews in Vladivostok with the WWF Project Coordinator for the Far East and the RFE Representative for ISAR; an interview in Moscow with a representative of HIID; and telephone conversations in the U.S. with representatives of the USFS knowledgeable about USFS/EPT activities in the RFE, indicate that effective coordination of effort is occurring at this level of collaboration.

At the same time, it is evident that a second, higher level of collaboration is needed, involving all U.S. Government agencies and private U.S. contractors engaged in implementing USAID EPT Program-funded activities in the RFE (as opposed to the EPT Subproject-funded activities being managed by the CH2M Hill consortium), as well as other environmental conservation and enterprise development schemes. Effective coordination at this level is needed because of the impact these other activities are having on the implementation of EPT/RFE activities.

As noted earlier, these agencies and contractors generally have their own sources of funding in addition to USAID funds provided under the EPT Project; their own implementation timeframes; and their own agendas. Some of them, e.g., the USFS, WWF and HIID, do not have long-term expatriate U.S. staff resident in the RFE. Also, there is no effective coordinative instrument presently in place, e.g., a coordinating committee, clearinghouse operation, systematic internet linkages, or periodic quarterly review process (however, the recent February 1996 Quarterly Review meeting seems to be a step in this direction).

The various EPT activities being funded under the first component of the RFE Subproject, which involves the development of an institutional framework for sustainable natural resource management, illustrate the need for close coordination of effort. HIID is playing a key role in the RFE in promoting the adoption of the policy changes needed to encourage private sector participation in sustainable forest management activities, and to ensure that sufficient incentives or non-compliance penalties are in place to force enterprises, when necessary, to regenerate harvested lands. HIID activities on this as on other RFE tasks are funded through a separate Cooperative Agreement with the USAID, not through DO #11.

For its part, the USFS is helping to conduct EPT workshops and providing training services for key Russian staff on forest fire prevention practices, forest regeneration and seedling production techniques. USFS participation in this as in other Subproject tasks, where called for, are funded by USAID through a separate Interagency Agreement. Such across-the-board and cross-cutting participation by organizations and agencies that are independently funded, certainly calls for the establishment and use of a strong and effective coordinative instrument or authority.

As one option, effective coordination could be achieved if the USAID were to station in Vladivostok a senior direct hire Resident Representative knowledgeable about the Region's environmental issues, and vested with real "COTR-like" authority.

The Contractor has suggested that another option would be to require all USAID contractors and grantees to follow the leadership of a single principal contractor or grantee. There are existing precedents for such an arrangement, such as the "prime among primes" arrangement that has been used successfully by the USAID Office of Population in many countries worldwide.

## **8. Quarterly reviews**

On the basis of its discussions with Contractor and USAID staff during its visit to the RFE in October-November of 1995, the Team noted that quarterly reviews were not viewed as being as effective a vehicle for program coordination or for the discussion and resolution of EPT/RFE Subproject implementation issues and problems as had been anticipated. According to USAID/Moscow staff, a request was made following the quarterly review conducted in June 1995 for the Contractor to provide USAID/Moscow with recommendations for project improvements that might be distilled out of the review session. As of November, only one unacceptable draft of "distillates" and planned actions had been received. The next scheduled review, to be held in October, was postponed until January 1996, ostensibly to enable RFE staff to participate in the mid-term evaluation.

Reports concerning the quarterly review meeting held in Vladivostok on February 13-14 have effectively reversed this finding. The Quarterly Review Report prepared for the February meeting clearly provides a good basis for the review and discussion of project progress and issues. An AID/W staff member who attended the meeting said that it had resulted in a number of decisions on pending issues and problems. Also, that the meeting had led to the clarification of Contractor coordinating responsibilities in the RFE, namely, that the EPT/RFE Project Manager would bear the responsibility for ensuring that the ETP-funded activities of all U.S. implementors are effectively coordinated.

## **9. The role of NGOs**

During its interviews in the RFE and Moscow with Contractor staff, USAID staff, and NGO representatives, the Team was told that the capacity of NGOs to induce broad-based community participation in project-funded forest conservation and bio-diversity initiatives was not being effectively tapped. It was noted during one interview, for example, that NGOs had participated in the project's integrated resource planning activity in the Chuguevsky Region, but had had little involvement with the planning process subsequently.

In response, the Contractor noted that the reference to Chuguevsky is accurate, but that it is stated in such a way as to indicate misunderstanding of the planning process. NGOs have participated in scoping meetings, along with the Krai Administration and other interested parties, and will continue to be invited to participate in meetings in which material is presented for discussion prior to decision making. In addition, NGOs will be represented on the Planning Council which provides oversight, and are well represented on the PCC which will recommend decisions.

The Contractor also noted that, in the face of uneasiness on the part of both Krai Administrations about the establishment of strong NGOs, EPT staff have served as an interface between the NGO community and the Krai Administrations, through such means as providing environmental NGO leaders with access to the Administrations through membership on the PCCs.

In sum, this is about as far as the contractor can push NGO involvement. At this point, the USAID is probably in a better position to stimulate more meaningful NGO involvement, and should consider pursuing this task more aggressively in support of the Contractor.

## **B. PROJECT IMPLEMENTATION**

### **1. The Contractor's implementation strategy**

The Contractor set up and followed a basic project implementation and management strategy in developing its initial Workplan. This included putting heavy reliance on Russian institutions and specialists in implementing the project; using the project to support and strengthen RFE institutions; demonstrating early in the implementation process the project's ability to provide positive economic benefits to the communities and enterprises that adopt sustainable management practices; and using a management system that assures that the project is field directed, that the many U.S. and Russian actors involved are moving toward the same ends, and that all actors are supporting each other.

The application of the Contractor's strategy in practice has been uneven. The Contractor moved decisively to set up a management system that would assure that the RFE Subproject is field directed. Delays were encountered, however, in getting the Vladivostok and Khabarovsk offices staffed. And the project's initial planning activities, at least, were not field directed, but were managed from Washington and largely involved the use of expatriate technical consultants.

In accordance with its strategy, the Contractor has placed heavy reliance on Russian institutions in implementing the project (e.g. the Krai Administrations, JCCs, Regional Environmental Centers, Russian Forest Service); however, the project's ability to provide positive economic benefits or incentives to communities and enterprises that adopt sustainable management practices has not been demonstrated early in the implementation process as the strategy requires. Approval of funding was delayed for both the Small Enterprise Fund and the Conservation Trust Fund, key instruments for demonstrating the project's ability to provide economic incentives.

### **2. The framework for project implementation**

Table 2.4 of the initial RFE Workplan illustrates another problem associated with the application of the Contractor's project implementation strategy, namely its reliance on getting the many U.S. and Russian actors involved moving toward the same ends, and all actors supporting each other. At a minimum, this requires the development and use of an integrated framework for project implementation. The Contractor has constructed such a framework in Table 2.4 of the initial workplan (see Attachment A hereto), but does not appear to be using it in managing implementation of the project.

For example, the Table shows the interrelationships of major RFE project tasks in terms of the project's three main components: policy and institutional framework, sustainable forest management, and biodiversity conservation management, and a fourth component, sustainable forest-based enterprise development. If it were being followed, this framework would facilitate getting the project's actors all moving towards the same ends.

Instead, the project is being implemented and managed task by task and, in some cases, subtask by subtask. In part, this is the result of the multitude of implementors and actors involved in the project, and the large number and variety of project tasks and subtasks that are to be carried out. In effect, the tasks are being implemented in parallel and there is little attention given to the sequencing of activities, making it difficult to demonstrate progress towards overall project (or project component) targets and objectives. The RFE Workplan Schedule (Gantt Chart) contained in the revised Workplan reflects the same task-by-task orientation.

Though grouped under desirable long-term objectives, many of the Project's varied tasks and sub-tasks are not being strategically focused, and the overall set of tasks lacks coherence. As a consequence, reports indicating the completion of most of these tasks and sub-tasks on schedule (by the end of 1995, as suggested by Table 2.4) do not in sum reflect that significant progress has been made towards achieving the project's overall objectives. Moreover, less than one-fifth of the Contractor's funding has been spent to date, suggesting that limited impact can be expected by the end-date of the contract.

### **3. Factors affecting the pace of implementation**

USAID staff turnover and frequently changing USAID directives at the time the project was being designed and during the early stages of implementation adversely affected the Contractor's ability to get the project going on a timely basis.

The decision to expand the program as the result of a Gore-Chernomyrdin Commission (GCC) meeting further delayed project design and implementation. The expanded project covers a much larger geographic area and embraces a greatly increased scope of work, including substantial increases in the number of activities and sub-contractors involved. In addition, the expansion imposed requirements for hiring additional technical staff that were difficult to meet.

USAID and State support for the EPT Project has been erratic. This is in part a function of staff turnover but is also reflected in USAID delays in approving funding for the Small Enterprise Fund and the Conservation Trust Fund and in State's apparent (and widely discussed) decision not to concur in allowing further funding to be provided the Contractor for the duration of the project.

### **4. Implementation problems and delays**

#### **a. HIID reports on forest resource problems and analyses**

HIID reports on forest resource problems and analyses related to proposed changes in forest resource policies were characterized during a Team interview as "slow to get going." The Team was subsequently told that the HIID reports on forestry problems have since been completed, and the analyses are underway.

#### **b. Outstanding procurement actions**

At the time of the Team's visit in November, there were outstanding procurement actions related to the provision of nursery materials and other fire fighting apparatus. It was noted that such delays bear heavily on the credibility of the Contractor's ability to deliver in the RFE. The

fire fighting equipment has since been delivered. The delays were caused by problems typically encountered in getting goods cleared through Russian Customs.

**c. The focus of the biodiversity management component**

During a Team interview in Khabarovsk with staff of a Russian environmental research institute involved in biodiversity conservation programs in the RFE, one of the senior members of the staff criticized the biodiversity component of the EPT project for being too focused on applied field work directed at saving the Siberian Tiger, and not enough on preserving its forested habitat. Similar criticism was heard during other interviews.

**d. Community development activities**

Community development activities being implemented with PERC were said to have been slow to begin because neither the Contractor (nor PERC) had a clear idea as to how to proceed in implementing this task. A short-term community development specialist was hired by the Contractor and made two trips to the RFE to determine the feasibility of ICDPs (Integrated Community Development Programs) which involve enterprise development as well as social action initiatives, but his findings were inconclusive.

The Team believes that the USAID, which has had considerable experience in community development programs and in the establishment of ICDPs in a number of developing countries, could bring greater resources and more expertise to bear on this task, than can the Contractor. Accordingly, USAID staff should intervene in getting the project's community development activities underway.

**e. Funding for the Small Enterprise Fund**

The Team was informed during interviews in the RFE and Moscow that the \$2 million in funding proposed for the Small Enterprise Fund was being withheld because the USAID was not convinced that the Fund would be sustainable. The USAID has since responded that sustainability was not the issue, potential duplication with other donors was.

In any event, the USAID has now confirmed that it will provide \$1 million to the Fund. In view of the important role that the Fund is expected to play in promoting the economic use of forest resources in the region through enterprise development, and given its potential for leveraging the use of USAID resources by attracting funding from other sources, consideration should be given to providing the full amount originally committed to the Fund.

**f. Funding for the Conservation Trust Fund**

The Team was told during its visit to the RFE that the World Wildlife Fund (WWF) had forwarded a proposal to USAID for the establishment of a Conservation Trust Fund as stipulated in the Delivery Order, but that the USAID had expressed skepticism about the proposal. We were subsequently informed by the USAID that it had awarded \$1 million to the WWF for the Trust Fund in September. Obviously, EPT field staff were not being kept fully informed as to the USAID's intentions regarding this matter.

**5. Financial parameters in relation to project implementation**



The Team believes that the \$7.85 million funding pipeline for the RFE component outstanding as of the end of September 1995 will be adequate to finance the balance of activities being implemented under the Subproject at the current rate of drawdown.

## IV. CONCLUSIONS

### A. PROJECT MANAGEMENT

1. **A more coherent, simplified and strategic framework of tasks needs to be constructed and used for project management and implementation tracking purposes.**

The discussion in Section III.B.2. above pertains.

2. **Effective coordination of effort is occurring at the CH2M Hill-led consortium level in managing EPT-funded activities; however, greater USAID involvement is needed to effect Contractor coordination with other U.S. implementors managing EPT-funded activities outside the consortium arrangement.**

The discussion in Section III.A.7. above pertains.

### B. PROJECT IMPLEMENTATION

1. **It appears likely that all of the project's current targets will be met before the expected completion date of the CH2M Hill contract.**

This assumes that current staff levels are maintained and that key management and technical staff remain on the job.

Nearly all of the persons interviewed by the Evaluation Team during its 12-day visit to the RFE consider Sub-Project tasks to be on track and progressing according to plan.

As reflected in Section II above, Contractor status reports show that a large number of Workplan activities have already been completed, and virtually all others are on schedule.

The Team sees the accomplishment of project targets on schedule as partly reflecting the Contractor's task-based and time-limited approach to project implementation. As indicated above, this is not necessarily a suitable approach to achieving long-term institution building objectives. Further, although current targets may be met, project objectives may not be.

USAID staff in Moscow, who have been monitoring implementation of the Subproject for some time, told the Team that they feel the project has accomplished very little to date and that there is little probability that much will have been accomplished by the project end date because of the sheer size and breadth of the program, the staffing difficulties encountered, and the prolonged delays in getting properly organized. Other USAID staff involved in monitoring the project do not agree with this assessment.

2. **By the end of the contract, a start will have been made toward realizing the project's objectives.**

The objectives of the Subproject: (1) to promote environmentally sustainable forest management in the Khabarovski and Primorski Territories of the Russian Far East, and (2) to protect critical habitats and endangered species in the Sikhote-Alin Mountain region, are broadly stated.

Whether the objectives are eventually fully realized will depend upon the extent to which the Russians who have participated in project-funded activities are prepared and committed to achieving them. The high degree of interest in project activities shown to date by the PCCs, and the effective community leadership demonstrated by the Vice-Governors of the Khabarovski and Primorski Krai, bodes well for the sustainability of EPT-generated environmental initiatives in the RFE and for continued progress towards achieving the project's objectives.

## **C. PROJECT IMPACT**

### **1. The project has notably reinforced Russian approaches to improving forest management and promoting biodiversity.**

It has strengthened the RFE region's institutional framework for sustainable natural resource management through the establishment of the PCCs, Joint Committees, and Regional Planning Councils. These institutions have considerable potential for getting broad community participation in conservation activities and in facilitating public-private sector cooperation.

It has conveyed important concepts for managing natural resources and for developing environmentally-friendly, value-added enterprises, through technical assistance, pilot projects, training seminars, workshops, and study tours.

It has identified the need for problem identification and policy analysis; for community involvement in environmental improvement activities; and for formulating alternative employment strategies in conjunction with forest preservation and biodiversity programs.

It has succeeded in bringing together a broad and diverse group of Russian planners, scientists and private interests to develop a platform for regional land use planning.

It has transferred to Russian agencies and institutions upgraded technologies and proven techniques for firefighting, resource mapping, the maintenance of seed storage and pilot greenhouse facilities, and small business training.

It has provided start-up grants to environmental NGOs, and initial funding for the Small Enterprise Fund and the Conservation Trust Fund, institutions that will be critically important to the region in achieving its environmental goals.

### **2. Given the vast scale of the region's environmental problems and the long term needed for systemic change, the project cannot be expected to accomplish its stated objectives within the PACD timeframe of 1999.**

Accomplishing these objectives will be a matter of decades, not years.

It may be necessary to extend the term of the project to ensure that selected objectives, such as those pertaining to the forest management component of the project and community development activities, are achieved.

## **V. RECOMMENDATIONS**

### **A. RECOMMENDATIONS FOR CH2M HILL**

- 1. The Team is recommending that USAID assume expanded, clear, hands-on control of RFE activities. Whether or not such change occurs, the Contractor will want to modify the project's implementation strategies.**

Such modification is needed to ensure that related tasks are more closely linked and sequenced, e.g., promoting community development, fostering community-based, environmentally-related enterprise development activities, and implementing community-based bio-diversity conservation activities.

- 2. CH2M Hill should participate more actively in developing and expanding a database on environmental issues.**

Linkage of text and tabular data should be combined with the eventual output of Geographic Information System (GIS) databases.

- 3. The Contractor should expedite publication of the Russia Update report it is creating to disseminate publicly information on the status and impact of EPT activities**

### **B. RECOMMENDATIONS FOR USAID/MOSCOW**

- 1. The consortium approach to initiating and implementing project activities should be reviewed.**

The responsibilities of consortium members in relation to the Contractor-led component of the overall EPT Project should be reviewed and reconfirmed on the basis of implementation experience to date and clarified, where necessary. Notwithstanding the reiteration of the coordinating authority of the Contractor's RFE Project Manager, the Team has noted general confusion as to what ISAR, HIID and the USFS do as separate implementors under the EPT Project, and what they do in relation to the Contractor-led component of the Project. Only the USAID can cure these ills.

- 2. USAID should continue to ensure that Quarterly Review meetings are well attended and productive.**

Periodic participation in the meetings by representatives of other donor agencies, e.g., the World Bank and the EBRD, should be considered.

- 3. The USAID should ensure that more emphasis is given by the Contractor to using EPT Project funding and training resources to broaden and deepen NGO participation in environmental improvement and bio-diversity conservation initiatives.**

USAID should take a stronger leadership position in getting an effective network of environmental NGOs and environmental advocacy groups established in the RFE, and in getting U.S.-based NGOs with environmental experience to locate in the RFE.

Specific attention should be given to NGOs engaged in public awareness and community participation activities. Consideration should be given to transferring the NGO technical specialist position in Moscow to the RFE office in Vladivostok.

**4. The USAID should ensure that the USFS establishes a formal and direct link with the Russian Forest Service**

Representatives of the Russian Ministry of Forestry in Moscow noted that, in addition to identifying locally-generated priority areas for forest policy improvement, a formal and direct link with the Russian Forest Service should be established. This is necessary in order to gain access to those experts who are currently at the forefront of determining laws that will affect forestry management throughout Russia for years to come.

A Russian-English forestry dictionary, published in 1966, should be widely distributed throughout the RFE region and made available to other EPT-funded activities in Russia.

**C. RECOMMENDATION FOR USAID/MOSCOW AND AID/W**

**The USAID should collaborate more closely with the Contractor in publicizing the types of activities being implemented**

In view of the global implications of the kinds of activities being implemented under the RFE project, the USAID should collaborate more closely with the Contractor in publicizing the types of activities being implemented and, when appropriate, the success of specific ventures, as a means of promoting greater public awareness of the region's urgent need for environmental improvements and the benefits of successfully fulfilling these needs.

**D. RECOMMENDATION FOR USAID AND CH2M HILL**

As noted in some detail in Section II.A.7. above, U.S.-funded environmental assistance activities in the Russia Far East region lack coordination. In view of the vast and complex social, economic and political context of the region, stronger coordination is essential if some measure of impact within the comparatively short time remaining under the EPT project (up to 1999) is to be achieved. The across-the-board participation in EPT-funded activities of organizations and agencies that are independently funded, calls for the establishment and use of a strong and well-directed coordinative instrument or authority.

The Team foresees three feasible options for establishing such an authority, in order to ensure that EPT-funded activities are effectively coordinated:

**First Option.** In view of the considerable high-level political interest in the RFE component and, given the global importance of preserving the region's bio-diversity and forest resources, under this option:

1. The USAID would take over the hands-on coordination of all EPT-funded activities in the RFE. Implementation of the EPT Project would be integrated operationally with implementation of the overall EPT Program and would no longer be managed as a separate undertaking. This would require the establishment of a full-time USAID Resident Representative position in the RFE.
2. CH2M Hill would be positioned to operate as the secretariat to the USAID Resident Representative, providing administrative and technical support for implementation of the overall EPT Program.
3. A consolidated Work Schedule would be drawn up to guide and coordinate implementation of the EPT Program-related activities of all consortium members through to the scheduled end-of-project date (1999).

**Second Option.** Under this option, and assuming the first option is not pursued, the EPT Project would continue to be implemented as at present with CH2M Hill as the lead contractor, however:

1. The USAID would upgrade the level of USAID staff participation in coordinating the overall EPT Program by having the USAID Mission Director serve as Chairman of an overall EPT Program Coordinating Committee, to include representatives of all USG agencies and all major U.S. private contractors or organizations participating in the implementation of EPT Program-funded activities.
2. The EPT Program Coordinating Committee would hold meetings semi-annually to review progress to date, the status of funding, and prospective actions. The meetings would be chaired by the Director of the USAID Environmental Office or his designate. One of the two semi-annual meetings would be held in Moscow yearly, to be chaired by the USAID Mission Director.
3. A consolidated Work Schedule would be drawn up to guide and coordinate implementation of the EPT Program-related activities of all consortium members through to the scheduled end-of-project date (1999).

**Third Option:** Under this option, and assuming neither of the first two options is pursued, the EPT Project would continue to be implemented as at present with CH2M Hill as the lead contractor; however:

1. USAID and the Contractor would narrow the scope and reduce the scale of RFE activities to manageable size, taking account of staff already in place or likely to be in place prior to the final 18 months of the contract, and continuing only those activities that appear likely to be sustainable beyond the end-of-project date (1999). The CH2M Hill contract would be extended to 1999 at no additional cost.

USAID/Moscow has noted that this recommendation was implemented during the 1996 workplanning process. It is being restated to facilitate further consideration of the three options.

2. The Contractor's RFE Workplan for 1996 would be modified to indicate which tasks are to be reduced in scale or narrowed in scope, transferred to other implementors, or terminated.

USAID/Moscow has noted that this recommendation was implemented during the 1996 workplanning process.

3. Available funding would be channelled to activities that are showing success or that are currently deemed critical to the achievement of project objectives.

USAID/Moscow has noted that this recommendation was implemented during the 1996 workplanning process.

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Table 2.4

Attachment

## INTERRELATIONSHIPS OF MAJOR RFE PROJECT TASKS

RFE SUSTAINABLE NATURAL RESOURCES MANAGEMENT PROJECT																						
		1995												1996								
Task No.	Description	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S
	<b>Policy &amp; Institutional Framework</b>																					
8a,12	Creation & support to PCCs and JC	xxxxxxxxxxx>																				
14a	Strengthening of Regional Envir Centers	xxxxxxxxxxx>																				
13,15	Grants & other support to NGOs	xxxxxxxxxxx>																				
1	Policy: Problem identification	xxxxxxxxxx																				
2	Policy analyses & recommendations	xxxxxxxxxxxxxxxxxxxx																				
4d-e,17c	Govt training & study tours	xx:xxxx																				
	<b>Sustainable Forest Management</b>																					
1	Problem identification	xxxxxxxxxx																				
2	Forestry policy analyses	xxxxxxxxxxxxxxxxxxxx																				
10k	Forest inventory data for mgmt. plans	xxxxxxxxxxxxxxxxxxx>																				
	(Prior: 10. GIS system startup)	xxxxx																				
20b	Training - best forestry practices	xx .xx x																				
20a,c	Best practice - work at pilot sites	xxxxxxxxxxxxxxxxxxx>																				
9c	Multiple-use planning workshops	xx xx																				
21	Forest fire mgmt improvements	xxxxxxxxxxx>																				
22	Pilot greenhouse & regen program on-line	xxxx>																				
4d-e	Policy training & study tour	xxxxx																				
9	Multiple-use plans at selected forestry sites	xxxxxxxxxx																				
16,17	Publicize results-Govt,enterprises,NGOs	xxxxxx>																				
3	Practical tests of policy reforms	xxxxxx>																				
	<b>Sustainable Forest-Based Enterprise Development</b>																					
1	Problem identification	xxxxxxxxxx																				
2	Policy analyses related to enterprise dev.	xxxxxxxxxxxxxxxxxxxx																				
18g	Criteria for Small Enterprise Fund	xx																				
18	Small Ent Fund begins making loans/grants	xxxx>																				
18,19,24	Market & enterprise analyses	xxxxxxxxxxx>																				
24	ICDPs lead to Small Ent Fund projects	xxxx>																				
19	First large projects initiated	xxxxxxx>																				
	<b>Biodiversity Conservation Management</b>																					
11a	Creat biodiversity working group	xx																				
1	Problem identification	xxxxxxxxxx																				
2	Policy analyses related to biodiversity mgmt.	xxxxxxxxxxxxxxxxxxxx																				
10c	GIS sytem startup	xxxxx																				
10f	Resource maps	xx xx																				
11j	Data base for GIS	xxxxxxxxxxxxxxxxxxx xx																				
11k	GAP analysis	xxxxxxxxxxxxxxxxxxxx																				
11m	Krai biodiversity plans completed	xxxxx																				
11	Specific initiatives to support strategies	xxxxxxxxxxxxxxxxxxx>																				
23a	Assistance to zapovedniks	xxxxxxxxxxxxxxxxxxx>																				
23f	Management plans for zapovedniks	xxxxxxxxxx																				
24	Community conservation projects	xxxxxxxxxxx>																				
23g	Create expanded system of protected areas	xxxxxxxxxxxxxx xx>																				
24	Conservation Trust begins operating	xxxxxx																				